AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

FACT SHEET
for health service organisations

Guidance for hospitals

Classifying electronic medication management (EMM)-related adverse events and incidents

The Australian Commission on Safety and Quality in Health Care (the Commission) is an Australian Government agency that leads and coordinates national improvements in the safety and quality of health care based on the best available evidence. By working in partnership with patients, carers, clinicians, the Australian, state and territory health systems, the private sector, managers and healthcare organisations, the Commission aims to ensure that the health system is better informed, supported and organised to deliver safe and high-quality care.

Health Information Technology (health IT) systems, such as Electronic Medication Management (EMM), continue to be implemented in acute and primary healthcare settings. The adoption of EMM has been associated with both increases and decreases in error, and the introduction of new error types.

Since the introduction of EMM systems, there have been reports citing a correlation between patient harm and the use of EMM.[1, 2, 3] This has included patient harm due to the display of information and configuration of alert functions. These and other new types of errors experienced in Australia, as well as internationally, have prompted the need for ongoing safety monitoring of EMM system implementation.

The development of standardised taxonomies to describe clinical incidents related to EMM systems continues to be a challenge in Australia and internationally with a multitude of classifications available for implementation. Australia required a standardised health IT-related incident classification system that provides a unified and consensus-based approach that can be readily applied during the EMM implementation process. This led to the development of **Guidance for hospitals: Classifying EMM-related adverse events and incidents** (the Guidance).

The Guidance has been informed by a 2019 **Update on approaches to the review and investigation of health IT-related patient safety incidents**[4] and consists of a set of tools to:

- Support classification of EMM-related adverse events and incidents
- Assess and classify the scale and consequence of actual or potential harm.

Hospitals will be able to use this information to guide EMM-related adverse event and incident investigation and prioritise health IT-related system improvement.

Classifying EMM-related adverse events and incidents

The set of tools comprises of three (3) classification schema. Each tool has been devised, based on national and international approaches to the review and investigation of medicine as well as EMM/CIS-related adverse events and incidents. The classification schemas are briefly described below.

1. Classification of prescribing and medicine administration adverse events and incidents

A classification system for prescribing and medicine administration adverse events and incidents based on a system developed by Westbrook and colleagues[5–6] and informed by a medication incident taxonomy developed in Victoria.[7]

The classification includes *procedural incident/failure* categories designed to be customised to reflect the procedures to be followed, underpinning local policies and protocols, and the potential focus for incident investigation.

2. Classification for problems associated with IT systems used in healthcare

A classification system for problems associated with the use of health IT systems, developed by Magrabi and colleagues. It was developed by examining 'natural categories' of problems described in incidents from a range of health care settings in Australia, the USA and England.[8–13]

3. Consequences classification of EMM-related adverse events and incidents

A classification system to assist with the assessment of the consequences and scale (or magnitude) of EMM-related adverse events and incidents. The classification also rates the potential and actual harm associated with these events.

Glossary

Administration: The act of giving a medicine to a person, which may include some activity to prepare the medicine to be administered.[14, 15]

It includes, the selection of the correct medicine or fluid (dose, dosage form, route and time), appropriate preparation (if required, e.g. reconstitution, dilution) and administration of the medicine to the correct patient, and appropriate record of administration.[7]

Adverse event: An incident that results, or could have resulted in, harm to a patient or consumer. A near miss is a type of adverse event.

Clinical information system (CIS): A computerised healthcare record and management system that is used by clinicians in healthcare settings. CISs are typically organisation-wide, have high levels of security and access, and have roles and rights (for example, prescribing medicines, reviewing laboratory results, administering intravenous fluids) specified for each clinical and administrative user. CISs enable electronic data entry and data retrieval by clinicians.[16] CISs include health IT-related systems such as electronic medication management (EMM) systems.

Incident (clinical): An event or circumstance that resulted, or could have resulted, in unnecessary or untended harm to a patient or a consumer; or a complaint, loss or damage. An incident may also be a near miss.

Medication error: Any preventable event that may cause or lead to inappropriate medicine use or patient harm, while the medicine is in the control of the clinician, patient or consumer. Such events may be related to the professional practice; healthcare products; procedures and systems, including prescribing; order communication; product labelling, packaging and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use.[17, 18]

Near miss: An incident or potential incident that was averted and did not cause harm but had the potential to do so.[19]

Prescribing: The process of issuing a prescription, writing a chart instruction or authorising the administration of a medicine/fluid, either via an electronic or handwritten prescription/order.[7] In addition, the prescription/order authorises the dispensing of medicine for a specified patient, noting that legal authority to prescribe is required.[15]

It is an iterative process involving the steps of information gathering, clinical decision making, communication, and evaluation that results in the initiation, continuation, or cessation of a medicine in light of the best available evidence and the patient's treatment goals.[7, 14, 20]

Procedural incident or failure: Failure to follow the procedures or set of instructions that make policies and protocols operational, which are specific to an organisation.

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Questions?

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